Remarks

Claims 1, 6-12, 15-25, 28-34, 37-46, 51, 54-60 & 63-72 remain pending. Of these claims, claims 8-11, 22, 30-33, 44, 56-59 & 70 stand allowed. This paper is directed to the remaining pending claims at issue.

By this amendment, independent claims 1, 18, 25, 40, 51 & 66 are each amended to more particularly point out and distinctly claim certain subject matter of the present invention. For example, each independent claim recites that creating of the priority ordered list of service addresses is performed by a distributed configuration manager component of the computing environment. This distributed configuration manger component is recited as maintaining configuration data for the computing environment. Additionally, the creating is recited to include determining whether any service addresses to be used are present on the client node, and if so, giving those service addresses a highest priority for the client node. Further, the creating includes identifying a plurality of service addresses of an equidistance of routing hops from the client node and for this set of service addresses, using a predefined equation to order the plurality of service addresses. This predefined equation balances use of the plurality of service addresses among the client node and at least one other client node of the computing environment, and employs, at least in part, a number of the client node, and a number of the plurality of service addresses having the equidistance number of routing hops.

Support for these amendments can be found throughout the application as filed. For example, reference canceled dependent claims 4, 5, 26, 27, 52 & 53. Further support for the amended language can be found in FIGs. 22-24, as well as supporting discussion thereof at page 61, line 26 - page 67, line 4 of the application. No new matter is added to the application by any amendment presented.

In the Final Office Action dated November 29, 2005, prior pending claims 1, 4-7, 12-21, 23-29, 34-43, 45-55, 60-69 & 71-72 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard (U.S. Patent No. 6,078,960; hereinafter Ballard) in view of Colby et al. (U.S. Patent No. 6,006,264 A; hereinafter Colby). This rejection is respectfully, but most strenuously traversed to any extent deemed applicable to the claims presented herewith, and reconsideration and withdrawal thereof are requested.

An "obviousness" determination requires an evaluation of whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art. In evaluating claimed subject matter as a whole, the Federal Circuit has expressly mandated that functional claim language be considered in evaluating a claim relative to the prior art. Applicants respectfully submit that the application of these standards to the independent claims at issue leads to the conclusion that the recited subject matter would not have been obvious to one of ordinary skill in the art based on the applied patents. Specifically, applicants respectfully submit that numerous aspects of the amended independent claims presented herewith are simply not taught or suggested by Ballard and Colby, either alone or in combination.

By way of example, applicants claim a method of providing an ordered list of service addresses (see claim 1). This method includes: creating *by distributed configuration manager component of a computing environment a priority ordered list of service addresses* to be used by a client node of the computing environment to reach a service of the computing environment. *The distributed configuration manager component is recited as maintaining configuration data for the computing environment.* Creating of the priority ordered list of service addresses by the distributed configuration manger component includes: *determining whether any service addresses to be used are present on the client node, and if so, giving those service addresses a highest priority for the client node; and identifying a plurality of service addresses of an equidistance number of routing hops from the client node,* and using a predefined equation to order the plurality of service addresses of equidistance number of routing hops from the client node. The predefined equation balancing use of the plurality of service addresses among the client node and at least one other client node of the computing environment, *and employing at least in part a number of the client node and a number of the plurality of service addresses having the equidistance number of routing hops from the client node.* The method further includes providing the ordered list created by the distributed configuration manger component to the client node; and then using the ordered list by the client node to reach the service, wherein the ordered list is ordered specifically for the client node based on one or more characteristics of the client node.

Thus, in applicants' claimed invention, a priority ordered list of service addresses is created by a distributed configuration manager component, and then provided to the client node

for use by the client node. This priority ordered list is created by: (1) determining whether any service addresses to be used are present on the client node, and if so, giving those service addresses a highest priority for the client node; and (2) identifying a plurality of service addresses of an equidistance number of routing hops from the client node and using a predefined equation to order the plurality of service addresses of equidistance number of routing hops from the client node. This predefined equation employed by the distributed configuration manager component balances use of the plurality of service addresses among the client node and at least one other client node of the computing environment. Further, the predefined equation employed by the distributed configuration manager component in prioritizing the service addresses uses a number of the client node and a number of the plurality of service addresses having the equidistance number of routing hops.

Initially, applicants respectfully submit that Ballard does not describe or suggest the existence of a distributed configuration manager component within the computing environment, let alone, such a component which creates a priority ordered list of service addresses, as recited in the independent claims at issue. Further, the independent claims have been amended herein to recite that this distributed configuration manger component maintains configuration data of the computing environment. A careful reading of Ballard fails to uncover any suggestion or implication of the existence of a distributed configuration manager component within the computing environment, let alone such a component which maintains the configuration data for the computing environment.

Additionally, a careful reading of Ballard fails to uncover any teaching or suggestion of a facility for creating a priority ordered list of service addresses at the distributed configuration manger component of the computing environment and in particular, one which includes the functionality outlined above, i.e., that the creating includes: determining whether any service addresses to be used are present on the client node, and if so, giving those service addresses a highest priority for the client node; and identifying a plurality of service addresses of an equidistance number of routing hops from the client node, and using a predefined equation to order that plurality of service addresses of equidistance number of routing hops from the client node. Still further, a careful reading of Ballard fails to uncover any teaching or suggestion that the predefined equation employed by the distributed configuration manger component utilizes at

least in part a number of the client node, and a number of the plurality of service addresses having the equidistance number of routing hops.

Additionally, there is no teaching or suggestion in Ballard that this created ordered list is then *provided* to the client node for use by the client node to reach the service. In Ballard, each client node receives the same load balance list (see col. 2, lines 1 & 22 of Ballard). This load balance list is not ordered when the client computer receives the list. Rather, Ballard teaches a process algorithm for then ordering the list at the client node. This required functionality of Ballard is opposite to that recited by applicants. In applicants' invention, the distributed configuration manager component of the computing environment creates the priority ordered list of service addresses, employing the functionality recited in the respective independent claims, and then provides the ordered list to the client node, which then uses the ordered list to reach the service. In applicants' approach, the client node is alleviated from any functionality or processing requirements to create the ordered list for deciding how to reach a given service. In applicants' approach, the client node simply uses the provided ordered list of service addresses. Again, the list provided to each client node in Ballard is a load balance list, and is the same list provided to each client node. Ballard then provides a discovery facility within the client node for ordering the list.

In applicants' recited invention, the ordered list received at the client node is ordered specifically for that client node based on one or more characteristics of the client node. The Office Action recognizes that Ballard does not teach this particular aspect of applicants' invention, but then cites the teachings of Colby in this regard. Without acquiescing to the characterizations of Colby stated in the Office Action, applicants note that this patent is not being cited for the above-noted characterizations of applicants' independent claims presented herewith. As such, it is believed that the rejection is rendered moot by the amendments presented.

Further, applicants respectfully submit that Colby discloses a method and system for directing a flow between a client and a server. Specifically, a content-aware *flow switch* intercepts a client content request in an IP network, and *transparently* directs the content request to a best-fit server. The best-fit server is chosen based on the type of content requested, the quality of the service requirements implied by the content request, the degree of load unavailable

servers, network congestion information and the proximity of the client to available servers. The flow switch detects the client-server flows based on the arrival of TCP SYNs and/or HTTP GETs from the client. The flow switch implicitly deduces the quality of service requirements of a flow based on the contents of the flow. The flow switch also provides the functionality of multiple physical web servers on a single web server in a way that is transparent to the client, through the use of virtual web host in flow pipes (see Abstract of Colby).

As expressly taught by Colby, "the entire process of server selection is transparent to the client." (See col. 2, lines 57&58.) In view of this, applicants respectfully submit that one of ordinary skill in the art would not have read the teaching of Colby in a manner as asserted in the Office Action and combine such teachings with Ballard. Ballard clearly teaches functionality for a client-side load-balancing (see title thereof). To extrapolate an ordering concept from Colby, which operates totally transparent to the client node, and then apply that teaching to the client node, is believed expressly contrary to the teachings of both patents.

Further, applicants respectfully submit that Colby does not teach or suggest the above-noted deficiencies of Ballard when applied against the amended independent claims presented herewith. In applicants' invention, a priority ordered list of service addresses is created at a distributed configuration manager component of the computing environment. (The distributed configuration manger component maintains configuration data for the computing environment.) Further, the independent claims presented characterize the creating step occurring at the distributing configuration manager component as including: (1) determining whether any service addresses to be used are present on the client node itself, and if so, giving those service addresses a highest priority for the client node; and (2) identifying a plurality of service addresses of an equidistance number of routing hops from the client node and using a predefined equation to order this plurality of service addresses of equidistance number of routing hops from the client node. Further, applicants' independent claims recite that the predefined equation balances use of the plurality of service addresses among the client node and at least one other client node of the computing environment and employs at least in part, a number of the client node and a number of the plurality of service addresses having the equidistance number of routing hops.

For at least the above-noted reasons, applicants respectfully request reconsideration and withdrawal of the obviousness rejection to the claims presented herewith based on the teachings of Ballard and Colby. Applicants respectfully traverse the rejection (to any extent deemed applicable to the amended independent claims presented herewith) based on a failure of the combined documents to disclose the particular functionality recited in applicants' now claimed invention; and that the basis of the combination of documents set forth in the Office Action is deficient since the documents teach away from such a combination.

Therefore, applicants respectfully request reconsideration and withdrawal of the obviousness rejection to the independent claims at issue based on the teachings of Ballard and Colby. The dependent claims are believed allowable for the same reasons as the independent claims, as well as for their own additional characterizations.

If a telephone conference would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided.

Respectfully submitted,

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